

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION SK-27

Effective August 1, 2011

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **April 2012**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code and the Texas Engineering Practice Act.

Pyramid Aluminum Fixed Skylights, Impact Resistant, manufactured by:

Solar Innovations
31 Roberts Road
Pine Grove, Pennsylvania 17963
Telephone: (570) 915-1500

are acceptable for use along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions, the design drawings referenced in this product evaluation report, and this product evaluation.

PRODUCT DESCRIPTION

The pyramid skylights are fixed aluminum glazed skylights. The pyramid aluminum fixed glazed skylights are impact resistant. This evaluation report is for pyramid aluminum fixed glazed skylights based on the following tested configuration:

General Description:

System	Description	Label Rating
1	Pyramid Aluminum Fixed Fixed Glazed Skylights	Maximum Size Tested: 8'3" W x 12'4" L x 4'10" H ASTM E 1886, ASTM E 1996 Missile Level D Design Pressure: ± 65 psf

Component Dimensions:

System	Overall Frame Size	Maximum Daylight Opening Size
1	99 $\frac{1}{4}$ " W x 147 $\frac{3}{4}$ " L x 56" H	45" x 60 $\frac{1}{8}$ "

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	IG-1	GM-1

Note: ¹ See the "Glass Construction Key" for the glazing construction.

² See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

IG-1: The skylight contains sealed insulating glass units. The insulating glass units are comprised of a $\frac{3}{16}$ " fully tempered glass lite and a laminated glass unit separated by a desiccant-filled steel spacer system. The laminated glass unit is comprised of two double strength ($\frac{1}{8}$ ") fully tempered glass lites with a 0.090" SGP interlayer by DuPont. The glass thickness used in the insulating glass unit of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass units are set from the exterior against silicone sealant and a multi-leaf flexible vinyl backbedding with an extruded aluminum pressure plate that is secured to the rafters.

Frame Construction: The frame is manufactured of extruded aluminum. An extruded aluminum hub is secured to the intersections of the rafters and the ridge with screws. An extruded aluminum glazing adaptor is secured to the face of the rafters and the purlins with screws. An aluminum flashing is utilized at the exterior perimeter assembly. The rafters are secured to the sill with thru-bolts and aluminum angles. The rafters are secured to the ridge with screws into a metal bracket. The frame members are not thermally broken.

Product Identification: A certification program label (NAMI) will be affixed to the skylight. The certification program label includes the manufacturer's name; product name: **Pyramid or Side Glazed Fixed Aluminum Skylight**; performance characteristics; the approved inspection agency (NAMI); and the following applicable standards: ASTM E283-04, ASTM E330-02, ASTM E 331-00, ASTM E547-00 and ASTM E 1886-02/05 and ASTM E 1996-02/05.

LIMITATIONS

Design pressures (DP):

System	Maximum Width (in.)	Maximum Length (in.)	Maximum Height (in.)	Design Pressure (psf)
1	99 $\frac{1}{4}$	147 $\frac{3}{4}$	56	± 65

Impact Resistance: These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The assemblies passed Missile Level D specified in ASTM E 1996-05. The assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These assemblies will not need to be protected with an impact protective system.

Acceptance of Smaller Assemblies: Identically built assemblies with dimensions equal to or smaller than those specified in this evaluation report are acceptable within the limitations specified in this evaluation report.

INSTALLATION INSTRUCTIONS

General: The skylight assembly shall be prepared and installed in accordance with the manufacturer's recommended installation instructions, the approved drawings referenced below, and this evaluation report. Detailed installation instructions and component drawings are available from the manufacturer.

Design Drawings: The skylights shall be installed in accordance with Drawing No. 08-01068, Rev A, titled "Pyramid Aluminum Fixed Skylight - Impact Resistant," sheets 1 through 8 of 8, dated August 4,

2010, and revised April 15, 2011, signed and sealed by Luis R. Lomas., P.E on April 15, 2011. The stated drawings will be referred to as the approved drawings in this evaluation report.

Roof Framing Construction: The skylights shall be mounted to wood dimension lumber framing as specified in the approved drawings. The wood framing shall be minimum 2x Spruce-Pine-Fir (specific gravity of 0.42 or greater) dimension lumber. The wood framing and the attachment of the wood framing to the roof framing of the structure shall be designed to resist the design pressures of the skylight as specified in this evaluation report and the approved drawings. The wood framing and the attachment of the wood framing to the structure shall be designed by an engineer licensed to practice in the State of Texas.

Installation:

- Refer to Sheets 4 of 8 thru 8 of 8 of the approved drawings for installation details.
- The approved drawings indicate the minimum embedment depths for the fasteners.

Note: The manufacturer's installation instructions and the design drawings shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.